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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/823,067

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EXAMINER

KANE, CORDELIA P

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/823,067	Applicant(s) SILVESTER ET AL.	
	Examiner CORDELIA KANE	Art Unit 2132	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12-19, 28 and 29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-19, 28 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1 – 10, 12 – 19, 28 and 29 have been considered but are moot in view of the new grounds of rejection.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 1, 2, 4, 6 – 8, 10, 12 – 19, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gennaro, and further in view of Poo et al's US Publication 2003/0005337 A1. Referring to claim 1, Gennaro teaches:
 - a. Receiving Z first multi-factor authentication data of Z different types (column 9, lines 1-11).
 - b. Encrypting the first multi-factor authentication data (column 9, lines 33-35).
 - c. Storing the encrypted first multi-factor authentication data (figure 7A, #769).
 - d. Determining if the second received multi-factor authentication data matches a subset of the first multi-factor authentication data of N different types (column 9, line 56- column 10 line 19) a user being authenticated if the second authentication data matches the subset of the first authentication data (column 10, lines 23-25).
4. Gennaro does not explicitly disclose authenticating using the subset of the stored authentication data where less than Z authentication factors are available for

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authenticating. However, Poo discloses having multiple templates stored (page 2, paragraph 23) and that when the biometric function is not working using a password for authentication instead (pages 5-6, paragraph 58). Gennaro and Poo are analogous art because they are from the same field of endeavor, biometrics. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Gennaro and Poo before him or her, to modify the system of Gennaro to include bypassing biometrics of Poo. The suggestion/motivation for doing so would have been to avoid a helpless situation where access cannot be had until the verification module is fixed (page 6, paragraph 58).

5. Referring to claim 2, Gennaro teaches that one of the inputs is a biometric sample (column 9, lines 2-3).

6. Referring to claim 4, Poo teaches that the processor is a microprocessor (page 1, paragraph 7).

7. Referring to claim 6, Poo teaches that there is a second processor separate from the first processor (pages 2-3, paragraph 25).

8. Referring to claim 7, Gennaro teaches:

e. That the resource being accessed is a database (column 1, lines 60-61). It is inherent that the system would be a computer and therefore have a processor, non-volatile memory, and a bus.

f. Receiving first user authentication data of Z different types (column 9, lines 1-11).

g. Storing the encrypted first user authentication data (figure 7A, #769).

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- h. Determining if the second received user authentication data matches a subset of the first user authentication data (column 9, line 56-column 10, line 19) the second user authentication data including authentication data of N types where N is less than Z (column 9, lines 11-18).
- 9. Gennaro does not explicitly disclose authenticating using the subset of the stored authentication data where less than Z authentication factors are available for authenticating. However, Poo discloses having multiple templates stored (page 2, paragraph 23) and that when the biometric function is not working using a password for authentication instead (pages 5-6, paragraph 58). Gennaro and Poo are analogous art because they are from the same field of endeavor, biometrics. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Gennaro and Poo before him or her, to modify the system of Gennaro to include bypassing biometrics of Poo. The suggestion/motivation for doing so would have been to avoid a helpless situation where access cannot be had until the verification module is fixed (page 6, paragraph 58).
- 10. Referring to claim 8, Gennaro teaches encrypting the first multi-factor authentication data (column 9, lines 33-35).
- 11. Referring to claim 10, Gennaro teaches that one of the inputs is a biometric sample (column 9, lines 2-3).
- 12. Referring to claims 12 and 13, Poo teaches that the second non-volatile memory is physically separated, as well as logically separated, from the first non-volatile memory (Figure 1A, 17 and 20).

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13. Referring to claim 14, Gennaro teaches:

i. Receiving N first multi-factor authentication data of N different types

(column 9, line 56 – column 10, line 19).

j. Decrypting the second multi-factor authentication data (column 3, lines 14-

16) including Z different types of authentication data where N is less than Z

(column 9, lines 1-18).

k. Determining if the first multi-factor authentication data matches a subset of

the second multi-factor authentication data (column 10, lines 16-19).

14. Gennaro does not explicitly disclose authenticating using the subset of the stored

authentication data where less than Z authentication factors are available for

authenticating. However, Poo discloses having multiple templates stored (page 2,

paragraph 23) and that when the biometric function is not working using a password for

authentication instead (pages 5-6, paragraph 58). Gennaro and Poo are analogous art

because they are from the same field of endeavor, biometrics. At the time of the

invention, it would have been obvious to one of ordinary skill in the art, having the

teachings of Gennaro and Poo before him or her, to modify the system of Gennaro to

include bypassing biometrics of Poo. The suggestion/motivation for doing so would

have been to avoid a helpless situation where access cannot be had until the

verification module is fixed (page 6, paragraph 58).

15. Referring to claim 15, Gennaro teaches:

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- l. Granting access to the resource if the first multi-factor authentication data matches the subset of the second multi-factor authentication data (column 10, lines 23-25).
 - m. Denying access if the first multi-factor authentication data does not match the second multi-factor authentication data (column 10, lines 21-23).
- 16. Referring to claim 16, Gennaro teaches requesting the first multi-factor authentication data in response to an attempt to access the resource (column 1, lines 58-61).
- 17. Referring to claim 17, Gennaro teaches that the first multi-factor authentication data includes a biometric sample (column 10, lines 15-16).
- 18. Referring to claim 18, Gennaro teaches:
 - n. Receiving second multi-factor authentication data (column 9, lines 1-6).
 - o. Encrypting the second multi-factor authentication data (column 9, lines 33-35).
 - p. Storing the second multi-factor authentication data (Figure 7A, #769).
- 19. Referring to claim 19, Poo teaches using an authentication processor separate from a main processor (pages 2-3, paragraph 25).
- 20. Referring to claim 28, Gennaro teaches:
 - q. Requesting autonomous user authentication sub-system to perform user authentication (column 9, lines 56-57).
 - r. Requesting N first multi-factor authentication data of N different types (column 9, line 56 – column 10, line 19).

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s. Determining whether to grant access to the resource based on whether the first multi-factor authentication data matches a subset of second multi-factor authentication data (column 10, lines 15-25) where the second multi-factor authentication data is encrypted and stored (Figure 7A, #769) the second multifactor authentication data including Z types of authentication data where N is less than Z (column 9, lines 14-16).

21. Gennaro does not explicitly disclose authenticating using the subset of the stored authentication data where less than Z authentication factors are available for authenticating. However, Poo discloses having multiple templates stored (page 2, paragraph 23) and that when the biometric function is not working using a password for authentication instead (pages 5-6, paragraph 58). Gennaro and Poo are analogous art because they are from the same field of endeavor, biometrics. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Gennaro and Poo before him or her, to modify the system of Gennaro to include bypassing biometrics of Poo. The suggestion/motivation for doing so would have been to avoid a helpless situation where access cannot be had until the verification module is fixed (page 6, paragraph 58).

22. Referring to claim 29, Gennaro teaches that the first multi-factor authentication data includes a biometric sample (column 10, lines 15-16).

23. Claims 3, 5 and 9 are rejected under 35 USC 103 (a) as being obvious over Gennaro in view of Poo and further in view of Harris. Gennaro in view of Poo discloses

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all the limitations of the parent claim. Gennaro in view of Poo does not appear to explicitly disclose using the Trusted Platform Module or protected execution. However, Harris discloses:

t. Using a Trusted Platform Module, and including the cryptographic engine (column 9, line 66 – column 10, line 4). (claims 3 and 9)

u. Utilizing one of the specifications that provide protected execution (column 10, lines 10-11). (claim 5)

24. Gennaro in view of Poo and Harris are analogous art because they are from the same field of endeavor, cryptography. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Gennaro in view of Poo and Harris before him or her, to modify Gennaro in view of Poo to include the Trusted Platform Module that provides protected execution of Harris. The motivation for doing so would have been that it provides a more secure and trusted computing platform (column 10, lines 10-11).

Conclusion

25. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CORDELIA KANE whose telephone number is (571)272-7771. The examiner can normally be reached on Monday - Thursday 8:00 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.

/C. K./
Examiner, Art Unit 2132

/Gilberto Barron Jr/
Supervisory Patent Examiner, Art Unit 2132